UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/827,738
Filing Date: April 06, 2001
Appellant(s): HARVEY, RICHARD HANS

JENNI R. MOEN
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 18, 2008, appealing from the Office action mailed

February 21, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Leung, C.M.R. "An object-oriented approach to directory systems" IEEE TENCON 90, vol. 2

(Sept 24-27, 1990), pages 736 - 740.

Rumbaugh, J et al., "Object-Oriented Modeling and Design" (year 1991), pages 366 - 396.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

Claims 1-7 and 22-28 are rejected under 35 U.S.C. l03(a) as being unpatentable over C.M.R.

Leung, "An object-oriented approach to directory systems" (Year 1990), pages 736-740 ("Leung") in view

of J. Rumbaugh et al., "Object-Oriented Modeling and Design" (Year 1991), pages 366-396,

("Rumbaugh").

As per claim 1, Leung discloses "a method of arranging and searching for data in a database"

(I.e., relational database; page 736, col. 1, paragraph 4) comprising:

"creating a first table adapted for storing data" (i.e., the DIT table holds "storing" the information of

the structure of the DIT; see Fig. 6 table DIT; page 739, col. 1, paragraph 1, lines 3-4) comprising at least

one data entry" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10), "the data entry comprising

a plurality of data components" (i.e., entry is made up of attributes, each with a type and more values; see

page 737, col. 1, paragraph 2, lines 5-6), "the first table comprising one row for each entry" (see Fig. 6

DIT);

"second table comprising one row for each of the plurality of data components" (i.e., entry is made up of attributes, each with a type and more values; see Fig. 6, ENTRY; page 737, col. 1, paragraph 2, lines 5-6); and;

"searching the rows of the second table to identify a particular one of the plurality of data components" (i.e., directories services: search; page 737, col. 2, paragraph 1); and

"returning the given data entry from the first table that includes the particular one of the plurality of data components" (i.e., returns the results; page 737, col. 2, last paragraph).

Leung fails to explicitly disclose creating a second table storing data components and having one row for each component of the data. However, Rumbaugh discloses creating a second table storing data components and having one row for each component of the data (see Rumbaugh Figs. 17.12 and 17.13, pages 380-381, paragraph 17.3.5). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Rumbaugh (see Rumbaugh Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16). Such a modification would allow the method of Leung to provide an excellent basis for modeling object oriented data base management system (DBMS) (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system.

As per claim 2, Leung discloses "the data is a structured data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claim 3, Leung discloses "the data is a string data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claim 4, Leung discloses "the data is or represents a X.509 certificate" (i.e., DSEP decodes the request and passes the decoded request in the form of Directory Abstract Services with the appropriate parameters to DOP; see figure 2, page 737, col. 2, paragraph 5).

As per claims 5 and 26, Leung discloses "a selected one of the data components is a checksum or fingerprint " (i.e., a means for collecting the results; see page 738, col. 1, paragraph 1).

As per claims 6 and 23, Leung discloses "where the database is a pm of an electronic directory services system" (i.e., the database systems used form an indispensable part of the directory systems; see page 736, col. 1, paragraph 4, lines 4-5).

As per claim 7, Leung discloses "where the electronic directory services system comprises an X.5OO and LDAP services system" (i.e., a directory (X.500) consists of one or more distributed Directory System Agents where directory information is kept and user requests are proposed, the DIT and DIB are partitioned and distributed in these DSAS each DSA also holds knowledge of the distribution of the DIT all requests in the form of directory abstract services from directory users must be submitted through Directory User Agents acting as the interface between the users; see Fig. 2 page 737, paragraphs 2 and 3).

As per claim 22, in addition to claim 1, Leung further discloses "a method of searching a database for given data entries" (see page 738, col. 1, paragraph 4);

"identifying a component identifier indicating a data type that is associated with the component of the first table" (i.e., each record holds the system identifier of an object and an attribute value of an attribute type of the object in both normalized and raw form; see page 739, col. 1, paragraph 1);

"using the component identifier indicating the data type to execute one of an exact or initial matching on a column of a second table in order to locate the component in the second table" (i.e., record contains the system identifier of an object and the RDNs are coded in such a way that matching them can be done efficiently; see page 739, col. 1, paragraph 1); and

"returning the given data entry from the first table matching the component located" (i.e., returning details of ENTRYs satisfying search conditions; see page 739, col. 1, paragraph 2).

As per claim 24, Leung discloses "an X.500 and LAPD services system" (i.e., X.500; see page 739, col. 1, last paragraph).

As per claim 25, in addition to claim 4, Leung discloses "the data is or represents one or more of the following a X.500 certificate, and a check sum of the data and or a fingerprint of the data" (see page 736, col. 1, paragraph 4).

As per claim 27, the limitations of claim 27 are similar to claim 5, therefore, the limitations of claim 27 are rejected in the analysis of claim 5, and this claim is rejected on that basis.

As per claim 28, Leung further discloses "components of the checksum or fingerprint are searched" (i.e., means for collecting the results it passes them to DSEP in the form of directory abstract services results; see page 738, col. 1, paragraph 1).

(10) Response to Argument

The Examiner will address the arguments in the order submitted by the appellant(s).

Argument:

Appellant argued, that "… the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest creating a second table storing the plurality of data components of the data entry of the first table," as recited in Appellant's Claim 1.

Response:

In response to appellant's argument, "…the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest creating a second table storing the plurality of data components of the data entry of the first table …" The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is

some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the instant application relates to a relational database management system (RDBMS) provides facilities for applications to store and manipulate data; see specification, page 1, lines 15-21.

Accordingly, Leung discloses the DIT table holds "stores" the information of the structure of the DIT; see Fig. 6 table DIT; page 739, col. 1, paragraph 1, lines 3-4.

Rumbaugh discloses a database management system, data model; see page 367; paragraph 17.1. Further, on page 368, lines 6-10, Rumbaugh discloses the conceptual schema integrates related applications and hides the peculiarities of the underlying DBMS, the internal schema deals with the limitations and features of a specific DBMS, the internal schema level consists of actual DBMS code required to implement the conceptual schema. Therefore, Rumbaugh discloses creating a second table storing data components and having one row for each component of the data (see Rumbaugh Figs. 17.12and 17.13, pages 380-381, paragraph 17.3.5). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Rumbaugh (see Rumbaugh Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16). Such a modification would allow the method of Leung to provide an excellent basis for modeling object oriented data base management system (DBMS) (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system. The combination of Leung in view of Rumbaugh discloses the claimed limitations.

It is noted, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Argument:

Appellant argued, "the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest "searching the rows of the second table to identify a particular one of the plurality of data components" and "returning the given data entry from the first table that includes the particular one of the plurality of data components," as recited in claim 1.

Response:

It is noted, Leung discloses search, returns details of ENTRYs which satisfied the specified search conditions within the specified search domain; page 739, col. 1, paragraph 2. Further, on page 739, column 1, penultimate paragraph, Leung discloses the requester calls the desired function with the parameters and it returns the results.

Accordingly, Rumbaugh discloses sql provides operators for manipulating tables, the sql select statements queries tables, the contents of the temporary table are returned as the answer to the query, additionally sql commands creates tables, insert and delete rows into tables and perform other functions; see page 369, section 17.2.2, it is noted that, the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Rumbaugh (see Rumbaugh Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16). Such a modification would allow the method of Leung to provide an excellent basis for modeling object oriented data base management system (DBMS) (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system. The combination of Leung in view of Rumbaugh discloses the claimed limitations.

Argument:

Appellant argued, "...contend that the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest the second table comprising one row for each of the plurality of data components of the given data entry of the first table," as recited in Appellant's claim 22.

Response:

In response to appellant's argument, "...the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest "the second table comprising one row for each of the plurality of data components of the given data entry of the first table," the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the instant application relates to a relational database management system (RDBMS) provides facilities for applications to store and manipulate data; see specification, page 1, lines 15-21.

Accordingly, Leung discloses the DIT table holds (storing) the information of the structure of the DIT; see Fig. 6 table DIT; page 739, col. 1, paragraph 1, lines 3-4.

Rumbaugh discloses sql provides operators for manipulating tables, the sql select statements queries tables, the contents of the temporary table are returned as the answer to the query, additionally sql commands creates tables, insert and delete rows into tables and perform other functions; see page 369, section 17.2.2. Therefore, the combination of Leung in view of Rumbaugh discloses the claimed limitations.

Argument:

Appellant argued, "the proposed Leung-Rumbaugh combination does not disclose, teach, or suggest the data is or represents a X.509 certificate."

Response:

It is noted, Leung discloses a directory system, which conforms to the latest X.500 standard; see page 736, col. 2, and paragraph 1. The arguments are not persuasive.

Argument:

Appellant argued, "… even the fact that references can be modified or combined does not render the resultant modification or combination obvious unless the prior art teaches or suggests the desirability of the modification or combination. The required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention. In re Dembiczak, 175 F.3d at 999, 50 U.S.P.Q.2d at 1617."

Response:

In response to appellant's argument, "…the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention…" It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Rumbaugh (see Rumbaugh Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16). Such a modification would allow the method of Leung to provide an excellent basis for modeling object oriented data base management system (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system. Thus, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings

of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Argument:

Appellant argued, "…It is clear based at least on the many distinctions discussed above that the proposed Leung-Rumbaugh combination does not, taken as a whole, suggest the claimed invention, taken as a whole. Rather, Applicant respectfully submits that the Examiner has merely pieced together an disjointed portions of references, with the benefit of hindsight using Applicant's claims as a blueprint, in attempt to reconstruct Applicant's claims…"

Response:

In response to appellant's argument, "the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Therefore, Rumbaugh discloses creating a second table storing data components and having one row for each component of the data (see Rumbaugh Figs. 17.12and 17.13, pages 380-381, paragraph 17.3.5). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Rumbaugh (see Rumbaugh Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16). Such a modification would allow the method of Leung to provide an excellent basis for modeling object oriented data base management system (DBMS) (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system. It is noted, that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" Applicant always has the opportunity to amend the claims

during prosecussion and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). The court found that applicant was advocating … the impermissible importation of subject matter from the specification into the claim. See also In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definition or otherwise that may be afforded by the written description contained in application's specification."). The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999) MPEP 2111.

For the above reasons, it is believed that the last Office Action dated February 21, 2008 was proper. Therefore, the Examiner maintains the rejection.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

/JEAN B. FLEURANTIN/

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/John Breene/

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July 18, 2008

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